### Patent Claims

### 1. Triazolopyrimidines of the formula

in which

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- R1 represents amino, represents in each case optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, alkoxy, alkenyloxy, alkynyloxy, cycloalkyloxy, alkylamino, dialkylamino, alkenylamino, alkynylamino, cycloalkylamino, N-cycloalkyl-N-alkylamino, alkylideneamino or heterocyclyl, and
- R<sup>2</sup> represents hydrogen or represents in each case optionally substituted alkyl, alkenyl, alkynyl or cycloalkyl, or
- R<sup>1</sup> and R<sup>2</sup> together with the nitrogen atom to which they are attached form an optionally substituted heterocyclic ring,
- 20 R<sup>3</sup> represents aryl which is optionally mono- to tetrasubstituted,
  - R<sup>4</sup> represents halogen, cyano or represents in each case optionally substituted alkoxy or dialkylamino and
- 25 X represents halogen.

- 2. Process for preparing triazolopyrimidines of the formula (I) according to Claim 1, characterized in that
  - (a) dihalotriazolopyrimidines of the formula

in which

 $R^3$ ,  $R^4$  and X are as defined above and

Y<sup>1</sup> represents halogen,

are reacted with an amine of the formula

$$R^{1}$$
 $N$ 
 $R^{2}$ 
 $H$ 
 $(III)$ 

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in which

R<sup>1</sup> and R<sup>2</sup> are as defined above,

- if appropriate in the presence of a diluent and if appropriate in the presence of an acid acceptor.
  - 3. Composition for controlling unwanted microorganisms, characterized in that it comprises at least one triazolopyrimidine of the formula (I) according to Claim 1, in addition to extenders and/or surfactants.

- 4. Use of triazolopyrimidines of the formula (I) according to Claim 1 for controlling unwanted microorganisms.
- 5. Method for controlling unwanted microorganisms, characterized in that triazolopyrimidines of the formula (I) according to Claim 1 are applied to the unwanted microorganisms and/or their habitat.
- 6. Process for preparing compositions for controlling unwanted microorganisms, characterized in that triazolopyrimidines of the formula (I) according to Claim 1 are mixed with extenders and/or surfactants.
- 7. Dihalotriazolopyrimidines of the formula

$$R^3$$
 $N$ 
 $N$ 
 $R^4$ 
 $(II)$ 

in which

 $R^3$ ,  $R^4$  and X are as defined above and

Y<sup>1</sup> represents halogen.

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8. Process for preparing dihalotriazolopyrimidines of the formula (II) according to Claim 7, characterized in that

# (b) dihydroxytriazolopyrimidines of the formula

$$R^3$$
 $N$ 
 $N$ 
 $R^4$ 
 $(IV)$ 

in which

 $R^3$  and  $R^4$  are as defined above

are reacted with halogenating agents, if appropriate in the presence of a diluent.

## 9. Dihydroxytriazolopyrimidines of the formula

$$R^3$$
 $N$ 
 $N$ 
 $R^4$ 
 $(IV)$ 

in which

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R<sup>3</sup> and R<sup>4</sup> are as defined above.

10. Process for preparing dihydroxytriazolopyrimidines of the formula (IV) according to Claim 9, characterized in that

(c) arylmalonic esters of the formula

$$R^3$$
 $COOR^5$ 
 $(V)$ 

in which

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R<sup>3</sup> is as defined above and

R<sup>5</sup> represents alkyl having 1 to 4 carbon atoms

are reacted with aminotriazoles of the formula

$$H_2N$$
 $N$ 
 $R^4$ 
(VI)

in which

15 R<sup>4</sup> is as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid binder.

20 11. Aminotriazoles of the formula

$$H_2N$$
 $N$ 
 $R^6$ 
 $(VIa)$ 

in which

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- R<sup>6</sup> represents cyano or bromine.
- 12. Process for preparing aminotriazoles of the formula (VI) according to Claim 11, characterized in that diaminotriazole of the formula

is initially diazotized and then reacted with a brominating agent or a cyanating agent, if appropriate in the presence of a diluent and if appropriate in the presence of further reaction auxiliaries.

## **Triazolopyrimidines**

#### Abstract

Novel triazolopyrimidines of the formula

in which

- R1 represents amino, represents in each case optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, alkoxy, alkenyloxy, alkynyloxy, cycloalkyloxy, alkylamino, dialkylamino, alkenylamino, alkynylamino, cycloalkylamino, N-cycloalkyl-N-alkylamino, alkylideneamino or heterocyclyl, and
- R<sup>2</sup> represents hydrogen or represents in each case optionally substituted alkyl, alkenyl, alkynyl or cycloalkyl, or
- R<sup>1</sup> and R<sup>2</sup> together with the nitrogen atom to which they are attached form an optionally substituted heterocyclic ring,
- R<sup>3</sup> represents aryl which is optionally mono- to tetrasubstituted,
- R<sup>4</sup> represents halogen, cyano or represents in each case optionally substituted alkoxy or dialkylamino and

# X represents halogen,

a process for preparing these novel substances and their use for controlling unwanted microorganisms.

## Novel intermediates of the formulae

$$R^3$$
 $N$ 
 $N$ 
 $R^4$ 
(II),

$$R^3$$
 $N$ 
 $N$ 
 $R^4$ 
 $(IV)$ 

and 
$$N = \mathbb{R}^6$$
 (VIa),

and processes for their preparation.